

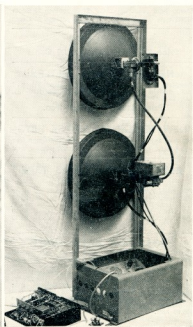
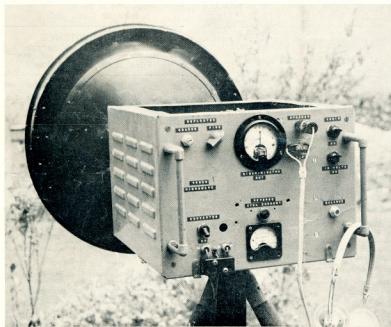
amateur radio

Vol. 40, No. 2

FEBRUARY, 1972

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amateur radio

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CONTENTS

Technical Articles—

	Page
A Drop of Home-Brew	5
A Tracking FM-AM Demodulator using an IC	3
ON F.M. Repeaters	7

General—

Amsat 1971 Annual Report	10
Around the Trade	11
Book Review	16
Contest Calendar	12
Cook Bi-Centenary Award	7
Correspondence	9
Divisional Notes	15
DX	12
Federal Comment: Changes in Federal Structure	2
Federal Repeater Secretariat	8
New Call Signs	14
New Five-Minute Adhesive	7
Overseas Magazine Index	11
Prediction Charts for February 1972	8
Reciprocal Licensing—Belgium	15
Silent Keys	16
Small Mechanical Drives	11
VHF	13
VHF Propagation	16
6 Metre Amateur Band	16
14th Jamboree on the Air	16

COVER STORY

Equipment used for 10 GHz. Australian record. At left, VKSZMW's
10.01 GHz. Station; at right, VK5CU/P's Tx and Rx Parabolae for 10.04 GHz.
See details in VHF Notes on page 13.

CHANGES IN FEDERAL STRUCTURE

On 17th January, 1972, the Wireless Institute of Australia was incorporated as a Company limited by guarantee.

It is now nearly ten years since the changes proposed in the Federal structure have led to the incorporation of the Federal body were first advanced to the Federal Council by the Victorian Division. In fact the need for change has resulted in change taking place before the structural changes could be implemented. For example, when the Victorian Division put forward its original proposals it foresaw that at some time in the future the Federal body could wish, one day, to employ a Secretary or Manager. The structure proposed was designed to allow this to occur. In fact a Manager has now been employed for nearly a year, though interim arrangements have had to be made with the Victorian Division pending finalisation of the incorporation of the Federal body.

We can, as an organisation take, I think, no pride in the fact that we took so long to take these steps that now seem to be so obvious.

In effect, the Federal body now has a completely new constitution in the form of its Articles of Association. It is, I think, appropriate to point to some of the changes that have been made and the consequences that flow from them. These points may be summarised as follows:

1. WHY A COMPANY?

The Wireless Institute of Australia is incorporated in Victoria as a Company limited by guarantee and it holds a certificate of the Attorney-General enabling it to dispense with the word "limited" in its title and by virtue of that certificate certain requirements of the Companies Act in relation to the lodgment of documents are not applicable to it. The Company has six "members", namely each of the Divisions. A company is a separate legal entity from the individuals that comprise it. This enables it to enter into contracts and undertake liabilities which ordinarily raise no question of the personal liability of either its members or officers.

2. "AMATEUR RADIO"

This issue of "Amateur Radio" will be the last issue published by the Victorian Division. One of the important changes proposed by the Victorian Division when it advanced its original proposals was that this magazine and the other publications of the Institute should be published by all Divisions. We are a large national body. This magazine is sent to all members of all Divisions. It is only reasonable that all Divisions should have an equal say in its content and production. Therefore, the Federal Council appoints an Editor and a Publications Committee. The Editor is a member of the Federal Executive and is Chairman of the Publications Committee. He is, there-

fore, in a position to see the day to day problems dealt with by the Federal Executive. He is in a position to consult with the Federal Executive as and when it becomes necessary. He will, of course, have the assistance of the Manager who will undertake a large part of the work associated with the magazine.

3. THE FEDERAL COUNCIL

Each Division will continue to be represented by a Federal Councillor. The Institute meeting in general meeting is called the Federal Council. The Articles envisage the appointment of an alternate Councillor to represent a Division at any particular or special meeting of the Federal Council. The annual general meeting, incidentally, is called the Federal Convention. As you can see, most of the fundamental concepts of our Federal body are preserved in the new form. One important difference is that the Federal Councillors are required to have the written authority of their Divisions to vote on behalf of their Division and upon their vote being cast their Division is thereupon bound by it.

In the past the decisions have been subject to ratification by the Divisions—generally speaking decisions of the Federal Council made at Easter at the Federal Convention have not been ratified by all the Divisions until August or even September. However, the new Articles do provide that a Federal Councillor may withhold his vote and exercise it within 30 days of the end of the Convention if he so wishes. This provision is designed to deal with any matter in respect of which the Federal Councillor feels that it is essential that he obtains guidance from his Division. If he does not exercise his vote within 30 days he is deemed to abstain.

4. THE FEDERAL EXECUTIVE

The Federal Executive are appointed at each Federal Convention. Under the old constitution the Federal Executive were nominated by one Division which is nominated as Headquarters Division and the nomination of the individuals is subject to ratification by the Divisions. This is all done prior to the Convention by mail.

The new Articles provide that the members of the Executive are appointed by the Federal Council at the Federal Convention. The new "constitution" has no concept of a Headquarters Division. The only qualification to be a member of the Federal Executive is that the individual is a member of a Division. As a matter of practical reality the Federal Council will, no doubt, at least in the foreseeable future, continue to appoint the members of the Federal Executive from one Division as the costs of bringing a member of the Federal Executive to regular meetings from other States would be certainly more than we can afford at this time. Indeed, the new

Articles go so far as to permit the Federal Council to appoint one of their members as President.

5. THE FEDERAL SECRETARY

I have already indicated how the Federal Executive are appointed and have also referred to the fact that the Editor of "Amateur Radio" is a member of the Federal Executive. Including the President and the Editor of "Amateur Radio" there are six members of the Federal Executive. In addition, the Articles provide that a Secretary shall be appointed by the Executive. The Secretary has no vote as a member of the Executive because it was envisaged (as will in fact be the case) that the Secretary will be a paid employee. The Attorney-General, in granting his certificate, requires that no paid employee can be appointed as a Director (in formal terms the members of the Federal Executive are the Directors of the new Company).

6. PROCEDURE

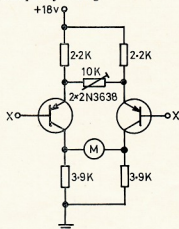
Generally speaking the procedural steps that will be utilised within the new framework parallel the procedural steps in the old structure. One important difference is that notice of motions must be given 30 days prior to a Federal Convention. A motion can still be passed at a Federal Convention even if notice has not been given. The Chairman has a discretion to permit such business to be brought forward but if he exercises his discretion to allow the matter to be considered, it requires three-quarters majority to be passed.

These, then, are some of the more important changes that take place with incorporation of the Wireless Institute of Australia. Many of the changes that have been incorporated in the Federal structure are designed primarily to facilitate the handling of its day to day affairs. The new structure does, however, permit the transfer of the publications to the Federal body so that they do become truly national. The structure will also facilitate many of the administrative changes that have already been implemented, such as the centralisation of subscription records and the E.D.P. processing of those records.

Ordinarily I am hesitant to pay tribute to the Victorian Division because I am mindful that, as a member of that Division, such comments could be misconstrued. However, on this occasion, I believe that I would have the support of all the Federal Councillors if I were to point out that these changes, which can only strengthen the Federal body, are due in no small measure to the foresight and truly national outlook of the members and the Council of the Victorian Division. We now have a far more effective structure thanks to that foresight. It is up to us to use that structure effectively.

—Michael J. Owen, VK3KJ,
Federal President, W.I.A.

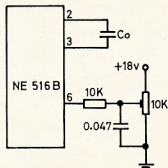
If operation at some i.f. other than 2 MHz. is desired, (e.g. 455 KHz.) it would be necessary to change the resonant circuit in the JFET amplifier, change the v.c.o. timing capacitor C_0 (e.g. 600-800 pF.) and the 90° phase shift network (e.g. 2.2K, 5K pot, 2×150 pF.). If a frequency less than 500 KHz. is required, consideration could be given to the NE565 which will function as an f.m./p.m. detector but does not provide for a.m. detection and consequently muting.



SIGNAL LEVEL INDICATOR

FIG. 4.

An alternate method of fine tuning the v.c.o. is shown in Fig. 5 in which current is injected into pin 6 of the IC. A change of +12% is possible for an input current of 1 mA. This method of fine tuning will also affect the tracking range of the demodulator.



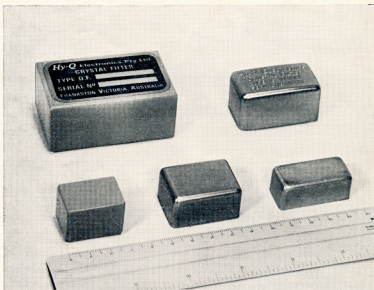
ALTERNATIVE VCO FINE TUNING — FIG. 5.

This completes the description of the phase-lock demodulator.

Such a unit as has been described in this article is in use in a satellite tracking receiver used for monitoring navigational and weather satellites. The principal use of the phase-lock type of detector for this application is the automatic tracking of the Doppler shift of the signal which is as much as ± 4 KHz. at the frequencies used.

(Continued on Page 7)

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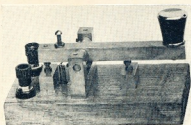


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A DROP OF HOME-BREW

C. A. CULLINAN,* VK3AXU

The plea by VK3UG in his letter to the Editor in the August 1970 issue of "Amateur Radio" (p. 21) regarding the shortage of Morse Code Keys prompted the writer to consider the possibility of making a Morse Key entirely with hand tools, the basic philosophy being that anyone within "A.R.'s" wide flung circulation area should be able to "home-brew" it with no more than an elementary skill in the use of tools.

A secondary consideration was that for a beginning Amateur as many of the tools as possible would be of use in other projects.

One of the great difficulties facing Radio Amateurs, as well as many other hobbyists, is the problem of finding sources of supply of parts. In the U.S.A. "QST" has devoted quite a lot of material to this problem and lately has been giving sources of supply with some constructional articles.

As far as this key was concerned no difficulty was experienced in obtaining the tools and most of the parts locally. (Hardware store, timber yard and automotive supply houses.) The other items were obtained readily from Radio Parts Pty. Ltd. Most of the tools can be obtained from Radio Parts too.

LIST OF TOOLS

- 1—snail counter-sink bit.
- 1—vyce, 2½" jaws.
- 1—hand-drill.
- 1—1/16" H.S. drill.
- 1—1/8" " "
- 1—3/16" " "
- 1—1/4" " "
- 1—17/64" " "
- 1—5/32" Whit. taper tap.
- 1—5/32" " plug
- 1—taper tap 3.5 mm. 0.6 mm. pitch
- 1—plug tap 3.5 mm. 0.6 mm. pitch
- 1—No. 33 drill H.S. (not No. 32)
- 1—pocket knife

These metric taps and the No. 33 drill may not be available "over the counter" but a local hardware store got them quite

easily for this project. They are used in the automotive electrical industry in drilling and threading holes for certain ignition points.

- 1—tap wrench or tap holder. (Be certain that it will hold the metric taps as they are rather small.)
- 1—hacksaw (preferably with at least one blade for brass and one blade for steel).
- 1—flat file, 12" long x 1¼" wide, mill bastard.
- 1—screw-driver, ¼" blade.
- 1—combination try and mitre square, with scriber.
- 1—hammer.
- 1—centre punch.

Note: The No. 33 drill is the correct size for the 3.5 mm. tap in brass. Its diameter is 0.1130" whereas the No. 32 drill is 0.1160".

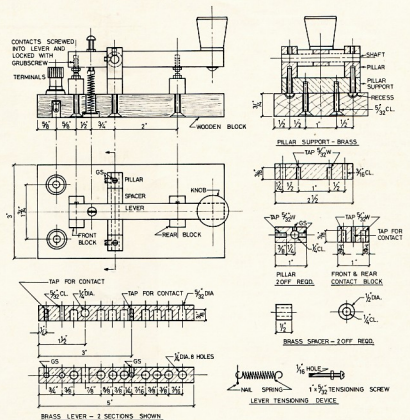
The No. 33 drill and the metric taps may be useful later on when Australia goes completely metric.

LIST OF COMPONENTS

- 1—piece brass, 18" long x ½" square.

- 1—piece silver steel rod, 6" long x ¼" diameter.
- 1—piece brass tubing, 2½" long x ¼" bore with minimum wall thickness of 1/16" or
- 1—piece brass rod, 2½" long x ¼" diam. Any good hardware store should be able to obtain this material although it may have to get larger quantities as some wholesalers will not cut off small quantities.
- 1—Turner 727 cupboard door knob or similar. (The brass, steel and knob were purchased for \$2.53 from the local hardware store.)
- 4—Lorimer ignition points, S20 (made in Australia) or
- 4—Lucas magneto contact sets, 484098 (made in Great Britain) or
- 4—Schier Kontakte 2008 for Auto-lite IGP3028A or IGP3028LS (made in Germany).

Only the screwed contact of these sets is used—all have a 3.5 x 0.6 mm. thread.



NOTES:—

W—BRITISH STANDARD WHITWORTH THREAD, GS—5/32 GRUB SCREW
CL—CLEARANCE HOLE
ALL FILING SCREWS—½ BRASS METAL THREADS
SCREWED CONTACTS—IGNITION COIL CONTACT—THREAD 3.5mm. ØA. 0.6mm. PITCH
SHAFT—½ ØA. x 7 ½ LONG MILD STEEL
½ SECTION BRASS USED THROUGH OUT UNLESS OTHERWISE NOTED



- 1—Gee-Jay spring ES35, 1" x 7/32" close wound tension spring.

No trouble was experienced in obtaining these from a local auto-electrical repair firm. The finished key used a mixture of all three of the above contacts just to determine the availability of these contact sets.

It is possible, also, to use the screwed contact made for A Model Fords, but these have a different thread so would require a different drill and taps to those in the parts list.

The local Ford dealer could have supplied some A Model Ford contacts from stock. Also for American readers, Sears Roebuck's catalogue quotes them as part number 28H290.

- 6—5/32" hollow pointed grub-screws.
2—terminals.
4—solder lugs.
2—5/32" lock washers.
1—5/32" hex. brass nut.
4—1" long x 5/32" round-head Whit. brass screws.

This material can be purchased from Radio Parts Pty. Ltd., although it may be necessary to purchase in gross lots, however the unused material will be useful in later projects.

- 1—piece hardwood 6" x 3" x 3/4" nominal.

To be cut square. Top and bottom to be finished flat. Finished size may be slightly smaller than the above due to machining. This was obtained without any difficulty from a local timber yard.

- 1—piece tinned copper wire, about 1 ft. x 22 s.w.g.
1—1" nail.

CONSTRUCTIONAL DETAILS

The drawings give details and the following notes are for guidance.

The spring is cut in half and a loop formed at the cut end of one piece. One end of the spring goes through a 1/16" hole drilled cross-wise through the 1" x 5/32" tension screw. The other end of the spring goes through a 17/64" hole bored through the wooden base and is held in place with a cut-off nail which lies in a groove scored in the base with a pocket knife.

Remove the filigree from the knob by breaking it away.

The shaft hole in the lever and shaft holes in the spacers are 1/4" diameter, but the shaft holes in the pillars are 17/64". The silver steel shaft should be 1/4" diameter and may have to be forced into the lever and spacers if they have been accurately drilled to 1/4".

The 17/64" holes in the pillars are a bit big but a drill in between 17/64" and 1/4" was not available and it was not desired to go to the expense of reamers or scrapers. This is the reason for the two locating grub-screws in each pillar. The threads for these should be cut with the taper tap so that the grub-screws will be tight.

The different makes of ignition contacts may vary in length of thread and may have to be cut off, particularly the rear one for the lever.

A number of 1/4" holes are counter-bored on the underneath side of the lever to reduce its mass, otherwise considerable exertion is needed when sending, to raise the lever, because of gravity, for spaces. If the tension spring is too tight then too much work is needed in sending.

Even as it is, the key is a bit "heavy," but has been operated at 30 w.p.m.

It can be made "lighter" if the lever is made from a piece of brass 5/16" wide x 7/16" deep and altering the length of the spacers. The rest of the brass work remains the same.

It is essential that the shaft holes all be drilled accurately or the shaft will bind in the pillars. This drilling may take some practice and is the reason that a piece of brass 18" long was purchased. Also, the ends of the spacers and the pillars must be filed flat.

If a drill press and lathe are available then it will be easier to make the key, however the one shown was made using hand tools only.

The cost can be reduced by using iron or brass screws for the two front

contacts, in which case the key will probably have a "soft" feel.

The cost of this project, apart from tools, was \$10, most of it being for the contacts as it was necessary to buy a "pair in a set" and discard the rivetted contact as no way could be worked out to use it.

So here is a key that won't blow up like some other "home-brew".

WIRELESS INSTITUTE OF AUST. VICTORIAN DIVISION A.O.C.P. CLASSES

Classes in theory and Morse will commence respectively on Tuesday, 15th February, 1972, and Thursday, 17th February, 1972, from 8 p.m. to 10 p.m. Subject to demand, a Saturday morning class in theory is also proposed.

Persons desirous of being enrolled should communicate with the Secretary, W.I.A., Vic. Division, P.O. Box 36, East Melbourne, Vic., 3002. Phone 41-3535 10 a.m. to 3 p.m.

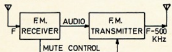


Barry VK2FE recently had the pleasure of receiving a painting, especially painted for him by talented Wollongong artist Kevin Pomeroy. The painting, a semi-abstract work, has Amateur Radio as the theme with personal touches of Barry's station throughout. Of significance is the "shadow" of the signpost. This would be something of a rarity in Amateur Radio to have a personalised painting with one's own station as the theme.

ON F.M. REPEATERS

The two basic forms of f.m. repeaters in use today are shown in block diagram form in Figs. 1 and 2.

The system in Fig. 1 has the disadvantage that the signal must be demodulated with consequent distortion and receiver threshold problems. However, it does have the advantage that the audio can be processed (filtered and compressed) before re-transmission.



DEMODULATE-REMODULATE REPEATER
FIG. 1

The system in Fig. 2 reduces distortion and threshold problems, but no simple way of signal processing is available before re-transmission. Thus the incoming signal must be degraded by the repeater before being re-radiated.

A somewhat superior version of the heterodyne repeater is shown in Fig. 3. Though it is not an original idea, the writer advocates it because it offers significant improvement over the systems used at present in Amateur repeaters/translators.

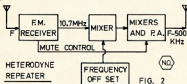


FIG. 2

Due to the action of the phase-lock loop (refer to articles in "A.R.", Jan., 1972, and this issue) we know that $F_1 = F_0 - F_a$, therefore $F_0 = F_1 + F_a$ and we obtain the offset in frequency. As outlined in a previous article on phase-lock loops, the output (F_0) of the loop is a cleaned up version of the input since the loop is effective a filter which rejects noise. Thus the incoming f.m. signal is not only translated in frequency, but the undesired noise on it is greatly reduced before it is re-transmitted.

The only additional components required above those in a heterodyne re-

peater are the phase-lock loop (one integrated circuit) and the band-pass filter (tuned circuit). This is not a very large price to pay for the substantial improvement gained.

Improved mute control can also be achieved by using a phase-lock loop IC containing a coherent amplitude detector which is used to operate the mute.

The author would be interested to hear from any repeater group intending to build a phase-lock repeater who require a design.

—R. F. Dannecker, VK4ZFD.

Demodulator using an IC

(Continued from Page 4)

When the proposed Amateur satellite with the active repeater on 432 MHz. becomes operational, Doppler shift of at least ± 10 KHz. will be experienced on the received signals from the satellite. It will therefore be necessary for stations receiving the signals to provide some form of tracking of the signal frequency. If such a tracking filter/demodulator as the one described in this article is used, the receiver bandwidth must be the signal bandwidth plus 20 KHz. to allow for Doppler shift.

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COOK BI-CENTENARY AWARD

The following additional stations have qualified for the Award:

Cert.	Call	Cert.	Call	Cert.	Call
1438	DLBJT	1441	PAQVB	1444	WBESMG
1439	AXZBANK	1442	AXSST	1445	SM3AWO
1440	DKILW	1443	HK4DF		

V.H.F./U.H.F. SECTION

Cert.	Call
31	AXSLP
32	AXJYET

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. Position in the list is determined by the first number shown. The first number represents the participant's total countries less any credits given for deleted countries. The second number shows the number of the total D.X.C.C. credits given, including deleted countries. Where totals are the same, listings will be alphabetical by call sign.

Credits for new members and those whose totals have been amended are also shown.

PHONE			
Cert. No.	Members	Total	
VK5MS	320/344	VK5AP	203/206
VK6RU	316/342	VK4FJ	236/237
VK3AHO	310/336	VK4YD	213/215
VK4KS	307/322	VK4TY	204/218
VK6MK	303/324	VK3ZE	276/279
VK3AB	296/314	VK2AAK	274/279

Cert. No.	Members	Total
124	VK3CR	101/101
125	VK3WV	100/100

Amendments:			
VK2SG	262/264	VK3AMK	238/238
VK2AAH	243/253		

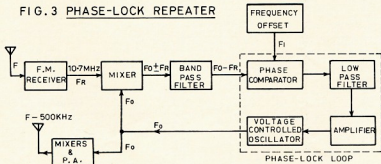
C.W.			
Cert. No.	Members	Total	
VK3QL	305/328	VK3ARX	271/278
VK2AHQ	300/315	VK3XB	270/284
VK4FJ	288/315	VK6RU	265/269
VK3AFK	286/294	VK3YD	263/265
VK3YL	285/303	VK4TY	250/272
VK3NC	273/300	VK3TL	254/260

Amendments:			
VK3JF	195/201	VK2AAH	140/149
VK2SG	142/146		

OPEN			
Cert. No.	Members	Total	
VK6RU	317/343	VK6MK	303/324
VK4SD	315/330	VK2EO	301/325
VK2VN	311/330	VK3ARX	301/308
VK4KS	308/327	VK2SG	280/304
VK4TY	306/321	VK4UC	288/298
VK2AFK	303/315	VK4FJ	297/323

Amendments:			
VK2AAH	255/269	VK3QV	130/130

FIG. 3 PHASE-LOCK REPEATER



FEDERAL REPEATER SECRETARIAT

Last year the F.R.S. was asked to investigate the clash of frequencies between the output of Channel 4 Repeaters and the proposed channels in the Project Australis Oscar 6 Satellite of 145.9 MHz. Although this problem has been temporarily averted, it must still be resolved because there will be future satellite programmes.

To understand the problem it is necessary to refer back to the formation of the 2 mx band f.m. nets in Australia. The availability of surplus f.m. equipment in the early 1960s prompted their use on the Amateur bands. The intended frequency was 146.000 MHz., but, as the story has it, a slip in the slide rule resulted in the evolution of Ch. A. In time, the three simplex Channels A, B and C developed. In VK2 another error resulted in 146.1 for Ch. C. About 1966/67 experimental repeaters (Orange 146.1 in, 145.85 out) and translators (Melbourne 21 with 145.76 in, 147.0 out) existed. When the right to establish repeaters was secured in July/August 1968 it became obvious that a standard was required, hence the Wodonga Conference.

Because the basic frequency was set by the existing simplex operations a decision was required on the number of channels and on input-output frequencies. It was decided at that Conference that since the bulk of the equipment coming into service was built to a commercial specification the repeater system should be made to fit that specification. It was agreed to use four channels for repeaters with frequencies on the 100 kHz. points on either side of the existing simplex system for compatibility. This meant that the frequency range

of tx tuning would be from Ch. A to Ch. 4, approximately 500 kHz. Likewise, the rx range extended from Ch. 1 to Ch. C, a similar 550 kHz. spread. It will be noticed that although the segment from 145.6 to 146.4 MHz. is 800 kHz., the tx and rx each use the overlapping 500kHz.

Most equipment operates satisfactorily without the need to re-tune from one channel to another. This was the specification reached. The greater the spacing between the input and the output frequencies at the repeater site, the less will be the rx desensitisation, but the practical limit is reached when the users' unit performances fall away. If there had been no simplex channels to be fitted into the scheme a separation of 2 or 3 MHz. could have been used.

In order that the maximum benefit could be obtained from the f.m. channels on a national basis it was decided to use three channels for the time being, namely one for simplex and two for repeaters. The channels chosen were Ch. B, Ch. 1 and Ch. 4. Development continued without major problems until last year when the Ch. 4 output frequency of 145.9 MHz. came into conflict with the "announced" satellite channels. As stated, although this is now clear for this satellite the problem remains for the future.

In the 2 mx band everything below 145.000 MHz. is in the International segment of the band. This means that if any future international system makes use of a frequency in use by an Australian system, then, Australia has an obligation to move. An ideal for Australia—

but not necessarily the most practical solution—would be to shift all our channels that are within the International segment to spots above 146.000 MHz. (i.e. Ch. 1 and Ch. 4 outputs plus Ch. A and Ch. B). Against this there are basically the cost of replacement crystals and the ability to establish new national standards. Note that at the moment Ch. B is the prime channel in any part of the country. The adoption of this ideal would therefore leave the International segment clear of Australian fixed channel operations. However, this has received mixed reactions, VK2 and VK3 appear to oppose it, but some support is forthcoming from VK5 and VK7.

Since the rest of the world possesses various systems within the segment 145.5 to 146.000 MHz., it is important that International agreement should be reached in this region of the frequency spectrum. The available information indicates that the following frequencies are in use or allocated:

Region 1

Europe & G: majority of beacons 145.90-146.000; DL repeater outputs: 145.7, 145.75, 145.8, 145.85, 145.9;

A.O.B. satellite channel: 145.925-145.975;

G satellite allocation: 145.85-145.95;

SM & OZ repeater outputs: 145.85, 145.75, 145.8, 145.85.

Region 2

No W repeaters;

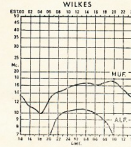
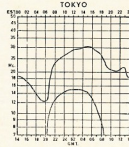
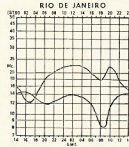
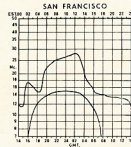
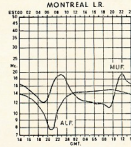
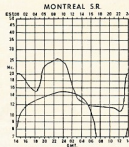
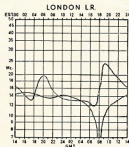
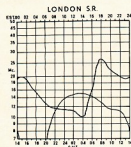
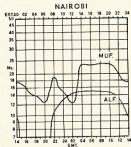
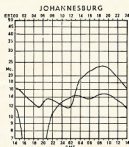
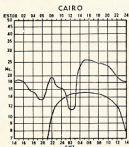
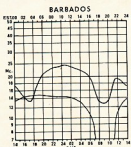
Amstat input: 145.9-146.0;

Some early Oscar satellites used 145.9.

(Continued on Page 11)

PREDICTION CHARTS FOR FEBRUARY 1972

(Prediction Charts by courtesy of Ionospheric Prediction Service)



Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the Publishers.

NOVICE LICENSING— SUPPLEMENTARY REPORT

Editor "A.R.," Dear Sir,

Admittedly, in the past, the question of so-called Novice class licenses has not impinged on my normal "live and let live" (apathetic?) nature, but after reading the Supplementary Report by the W.I.A. Novice Licensing Investigation Committee ("A.R.," Jan. 1972), I was quite literally stunned by the implications of the proposals as outlined.

At this point I would like to make clear that I am not opposed to Novice licensing whether called by that name or any other. However, opinion being what it is, it appears inevitable that proposals regarding this class of licence will be submitted to the relevant authority, and it is to some of the proposals as recommended to Whitley that I wish to comment.

Section (c) states that there should be no limitation on tenure for Novice licensees. As the standard required regarding technical proficiency would be lower than that demanded for other licensees, I think that any Novice should be expected, within a given time, to upgrade to the general standard. Twelve months, or at least two years, should be more than adequate.

A portion of Section (d) recommends Mobile operation (as a passenger). No comment—except to suggest that there must be some incredibly naive people who could imagine adherence to a regulation of this nature.

Section (i) at least gives my somewhat detailed but superficial suggestions as does that of the other sections. The main points are that techniques involved on v.h.f. and u.h.f., to which I am relegated, are more complex than those employed by h.f. brethren. My thoughts are that if Novice licensees are to be permitted on h.f. then v.h.f. and u.h.f. should suffer equally.

The third part relating to Section (j) is undoubtedly the gem of the whole collection, implying as it does that wherever else the Novice is allowed to run riot, he must be kept out of the highly populated ground of the DX fields on 14 MHz. My thoughts on this are the same as for the preceding sections.

Referring to "Recommendations for Action", Section (b), proposes full membership of the Institute for Novice licensees. I feel that this move, while it might be laudable in principle, the voting power of this group would be out of proportion, considering the as yet unassessed worth of the scheme. Further, the voting power of the Novice licensees would naturally be predisposed toward any person or group championing their cause.

This letter was triggered off by a somewhat lengthy discussion this morning (Sunday, 9th January) on 52.525 MHz. in which was involved quite a large group of Amateurs holding both Full and limited licenses, and although I make it clear that all views expressed above are my own, the opinions of the other participants, while I am permitted to repeat them, do not necessarily agree with mine. In my memory serves me correctly, only one person was for the scheme, with many reservations, while the other members of the group were against the proposal as they stood, or were against the proposal as a Novice license in toto.

The operator suggested that the scheme would create a "ghetto", a view to which I am inclined to subscribe.

I added my voice to the point that Novices would enjoy greater privileges than the present Limited licensees, and it was suggested that proposals for this group to be allowed to practice c.w. on air using m.c.w. crystal controlled whip antennas, present restricted bands, would be of far more value in raising standards than jamming full band restrictions.

The logical extensions of this idea would be to permit the present Limited licensee to pass a 5 w.p.m. c.w. test which would then allow him to both transmit and c.w. on his present allocations, plus the 10 metre band.

To conclude, I feel that any degradation of the present theory examination would be a retrograde step. The standard of examination should be expended on education programmes to assist prospective candidates in raising their degree of competence to the required level.

—Alex H. McKibbin, VK3YEO.

Editor "A.R.," Dear Sir,

I have been following arguments on Novice licensing and have been struck by the matter being thrashed out but I am dismayed at the final conclusion of the committee published Jan. 1972. "A.R.," I am completely opposed to any reduction in the standards of the exam as it stands, the issuing of a certificate and a permanent licence on the substandard exam.

A certificate represents a degree of proficiency—not the result of the exam. The substandard exam is low enough as it is, particularly Morse code. A person can pass a 10 w.p.m. test and then completely forget it as it is not a requirement. What is the use of an exam in Morse code that does not determine whether the candidate can read Morse code? The main purpose of the Wireless Telegraphy Act in accordance with the International Regulations that any person operating h.f. equipment must be able to read Morse code. Therefore anyone who completely forgets Morse code is an illegal operator. The test should surely be at such a speed that it will reasonably ensure that the candidate can read Morse code and will not forget it in a short time. The foregoing was a side track to illustrate that the exam is low enough in standard as it is, now back to the point.

I consider that the Novice licence should be of limited duration and that no certificate should be issued (don't say "Oh that again" before you read the rest). The main purpose of the examination is to ensure that the committee would appear to be to provide a means of learning Morse on the air. If the committee does not consider that there should be a permanent group of restricted licensees or if there is they will not present a problem. I point out on point.

What sort of people are going to obtain lower class licences and what purpose are they going to serve? One group is due to back ability cannot pass with the higher grade of licence in theory, Morse or both. I think these will form the minor part of the restricted licencees. The main group will be those who have some interest in the hobby but as yet have not yet gained sufficient interest to obtain a higher grade. If they obtain a lower class licence, people in this group will either lose interest and go out of existence, or interest and obtain an A.O.C.P. or A.O.L.C.P.

In the proposal of the committee the licence will be permanent—the key to retaining the operator's interest in Morse. The main reason why there is no other reason why he should not have phone privileges as well. In fact if a large group of these operators retain the licence, and also the right to use the phone, they will probably be given full membership in the Institute, they will form a disgruntled pressure group. After all, why should they have a phone? Morse code is not the most important thing in the world. Give them phone and they will regard Morse as a minor part of the whole thing. There will also be some who will forget their code and cease to operate, retaining their licence for prestige reasons only—a licence deserving no prestige.

The main bone of contention about a limited period licence is that when the licence expires and the operator is still interested, he will be required to sit the exam again. I don't know when the solution is so simple I don't know—allow him to sit for the licence again.

The original proposal put forward in 1952 was that the licence should be for 10 years and 28 MHz. and a.m. or c.w. in part of 144 MHz. with a limited period licence, 10 watts, lat control group with 100 watts.

Consider the persons who may obtain such a licence. A large proportion will lose interest by the end of the period, in which case their licence will lapse. Some may be tempted to become pirates for their period of interest. There should be a ready market for their gear and they will be coming back. Some may lose interest in c.w. and operate 2 phone only, in which case they will obtain Limited licences. Others will, after a period of time, be able to obtain a higher grade. About those who do none of these things and want to retain their Novice licence after the date of expiration, they should be required to sit the Novice exam. This will ensure that they don't forget their Morse code and that they don't retain the licence for the sake of keeping it.

1. Advocate among other things:
1. That the period of the licence should be two years.
2. That no certificate be issued—the licence be issued on the exam results only (some statement as to the standard passed could be printed on the licence).
3. That since the licence is only temporary, they should be associate members of the Institute only.

—J. A. Adecock, VK3ACA.

Editor "A.R.," Dear Sir,

Could I add a thought to the accumulated evidence concerning the proposed changes?

The idea is a simple exam, not involving a Morse code test. Operation on Amateur segment of 27 MHz. band, phone, limited to one or two watts, and a licence. This could be in effect creating a sort of Citizens Band, with some favorable differences. The operators would be paying a licence fee to the government revenue, and using a call sign. Note: It is alleged many unlicensed operators are on 27.12 MHz. If correct, this position would be largely rectified.

The W.I.A. should gain many more members who would mostly gain in short time for Z calls and many later, but it does.

All the present suggestions I have heard and read about for Novice licensees seem to call for a Morse test and written and regulation exams. These proposals together, would appear almost equivalent to the requirements for a Z call which ones one requires a Morse test.

Morse code seems to bluff many potential examinees. I know it's easy and should not bluff or deter anyone, but it does.

I personally know a large number of people aged from 16 to 60 years who would very much like to enter the ranks of Amateur Radio, but who are deterred by the standards. I feel they have insufficient time to spare studying what appears to them important points of difficulty, and the standards seem so mysterious and complicated before you really study them.

Obviously, members of the community feel the days of studying seemingly difficult subjects are just beyond them, especially in rural areas where personal attendance at W.I.A. classes is not possible.

Many keen aspirants have tried the exam, sometimes two or three times, but they just cannot make the grade.

Give all these potential Amateurs an easier but restricted chance, and I am absolutely certain that they will gain the necessary and practical knowledge to upgrade their qualifications.

Consequently, I claim considerable importance should be attached to encouraging and helping youths with worthwhile hobbies, as a distinct community obligation by more senior citizens. Amateur Radio is one of the finest, as we all know.

—K. V. Scott, VK3SS.

[International Radio Regulations require Morse code proficiency for operators of Amateur Stations on the 27 MHz. band—see page 32 of the Handbook.—E.J.]

REPEATER FREQUENCIES AND AUSTRALAS OSCAR "B"

Editor "A.R.," Dear Sir,

The Geelong Amateur Radio Transmitter Group notes with concern the inclusion of the VHF Notes in Dec. "A.R." that repeater frequencies may be changed to avoid a clash in frequencies with the Australas Oscar "B" frequencies. We fully appreciate that the choice of frequencies was determined by international as well as (or instead of) local considerations, but we believe that the choice of frequencies for the satellite of 145.9 MHz. is not in the best interests of the Australian Amateur.

Our problem is that the frequency of 145.9 MHz. is also the output frequency for repeaters on Channel 4. The fact that the repeater is not always turned off during satellite passes (approximately every two hours) is impracticable, and contrary to the whole concept of a service required by the user. The fact that the signal into the satellite; trouble is more likely with Amateurs working into the satellite being heard on carbonium tanned to the repeater.

The suggested alternative is to shift the Channel 4 output frequency. This means at least one severe modification to every Amateur who uses a Channel 4 repeater—on Channel 1, since Channel 1 will also have to shift to conform. Taken over the whole of Australia, the value of the modification is useless would be considerable. And the cost of a replacement crystal is certainly no trifle. It has been suggested that the repeaters are shifted 1 MHz. up (Ch. 1 to 146.6, Ch. 4 to 146.9) the performance of most of the repeaters would be improved.

The repeater frequencies were fixed at the Technical Group Meeting at Wodonga in September 1966. These frequencies were fixed as permanent national frequencies, and the decisions of the meeting were published in "A.R." Frequencies have been obtained and a good deal of money has been spent. But these frequencies would remain as fixed. Now, decisions seriously prejudicing the use of these frequencies have been made, and there is no opportunity for adequate discussion, and the

(Continued on Page 11)

CORRESPONDENCE

(Continued from Page 9)

fail accomplish hidden in a para, in the VHF Notes. We are told to communicate with the I.A. Federal Repeater Secretariat if we have any problems or suggestions concerning repeaters, but I am still waiting on their replies to letters of mine dated 25th May and 12th July, 1971. As the number of Amateurs using repeaters far exceeds those who will be using the satellite, the Committee of the Geelong Repeater would like to hear their views expressed.

—D. J. Laidlaw, VK3ZTA, Secretary, Geelong Amateur Radio Translator Group.

(The Federal Executive of the W.I.A. wish to assure the Geelong Amateur Radio Translator Group and other interested parties that no decisions have been made concerning repeater frequencies and that it is not the intention of the Institute to make changes of this nature without members being given prior notice and opportunity for discussion. It is true that a problem has arisen since the 1968 Wodonga meeting and that this has assumed a greater degree of importance since the I.T.U. Space Conference held in Geneva last year. The question will no doubt be raised at the next Federal Convention (held in Melbourne this year over the Easter week-end) and all interested parties are asked to make the Amateur in tact and pass along their views to the Federal Repeater Secretariat and their Federal Council. It is probable all points of view will be fully discussed at this Convention.—D. H. Rankin, Federal Vice-President, for Federal Executive.)

"SALTY" WHIWA PASSES ON

Editor "A.R.," Dear Sir,

I was recently in contact with WB0ZGW in New Jersey and received information regarding a very well known Amateur to Australia has passed away.

WHIWA, Sidney ("Salty") C. F. C. Belcher passed away on November 13, 1971.

"Salty" was well known to many Amateurs in Australian circles on c.w. and s.s.b. and was especially known while he was active as Chief Radio Officer of the Queen Mary before the ship was sold to an American company.

—Howard A. Lilley, VK2AYT.



OVERSEAS MAGAZINE INDEX

Key (all 1971): 1, "Ham Radio," July; 2, "Radio," July; 3, "QRP," Aug.; 4, "Shortwave," Sept.; 5, "Shortwave," Oct.; 6, "Radio," Nov.; 7, "Radio," Dec.

Antennas: Rejuvenating that old Prop-Pitch Rotator (4); Review: Kirk Helicoid Beams (89 to \$110 U.S.A.); (4); Dipole Facts (6).

Accessories: CRT Intensifier for R.T.Y. (1); 6 mX Antenna Coupler (1); Audio Signal Generator (1); A Filter Box for C.W. Ops. (3); A Technique for Burst Two-Tone Testing of Lin-Amp Amps. (4); How to make a low-cost Mechanism (4); R.F. Triggered C.W. Monitor (this fellow has designed the very thing) (6).

General: Scandinavia, The Balkans and North Africa, the story of their Amateurs (3); Why use f.m. advantages and disadvantages? (2); 2 mX f.m., simply and economically (2); "CQ" Reviews: The Swan Twins (600K and 600T, reviewer liked them) (2); "CQ" Reviews: The Swan FM-2X (2); Semiconductor Curve Tracer for the Amateur, Part 1 (4); A Tale of Two Crystals, are not always stable (4); Cruise of the "Chamara", maritime mobile in a tri-maran (6); Moonlight Madness, ZS1SP operates in Capetown emergency communications operation in Capetown during Boer War (7); History of Amateur Radio in South Africa (7).

Receiving: IC Rx for 80 mX (1); Pip-Squawk Mk. II. (4); Review: Ten-Tec RX100 Spectrum (4); Tuning the V.H.F./U.H.F. Spectrum (7).

Transmitting: The Motorola 80C on 220 MHz. f.m. (2); Solid State 2 mX f.m. Tx (1); Miniature Acorn DX-100, 2 mX f.m. Tx (1); Booming MFz, Franklin V.I.O. (claims "extreme" good stability) (4); The Cabover Kilowatt (mobile/portable in comfort) (4); 80 mX Integrated Circuit Transmitter (1); Transistor Modulator, a.m. is not yet dead (6).

Other: An IC Audio Processor (3); Camera Conversion from fast to slow scan tv. (1); Computer DX-100 prediction (4); Pulse Count Discriminator Unit (1); Variable Tripler for v.h.f. (6); High Impedance Voltmeter (6).

SMALL MECHANICAL DRIVES

Four new miniature drives, suitable for fine manual tuning of equipment ranging from domestic radio receivers to professional telecommunications equipment and scientific instruments, have been added to the range of small mechanical drives made by Jackson Brothers (London) Ltd.

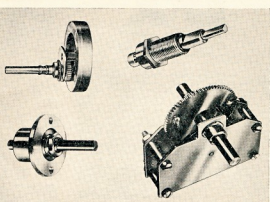
The Accelerator Spindle Drive (Fig. 1)—Cat. No. 581-B—is a coarse drive unit intended for modern radio receivers with extra-long scales. It incorporates a 2½-inch diam. (57 mm.) zinc-alloy flywheel driven through nylon-to-brass step-up gears, mounted on twice the speed of the drive-shaft. The complete unit weighs only 6 oz. (170 g.) but provides an inertial effect equivalent to a much larger flywheel, permitting rapid traverse of the scale.

The Nylon-Bearing Spindle Shaft—Cat. No. 455B—nylon-nixed at the new drive, to which various flywheels can be attached. To provide an even smoother "feeling" for fine-tuning, "feeling" for fine-tuning, it provides a 10:1 reduction ratio between coaxial input and output shafts, with a limiting output torque (beyond which internal slipping occurs without damage) greater than 30 oz.-in. (2.2 kg.-cm.). It measures 2-1/8 inches (54 mm.) overall length by 1-7/16 inches (36.5 mm.) diameter of mounting flange.

The Turn-Speed Epicyclic Ball Drive (Fig. 3)—Cat. No. 504-B—is intended for driving a small potentiometer or variable capacitor—e.g. in small electronic test equipment. Two co-axial inputs provide direct drive for coarse adjustment and a 5:1 reduction for fine adjustment. Limiting output torque is 10 oz.-in. (0.6 kg.-cm.).

The earlier G80 Drive (Fig. 4)—Cat. No. 559—built to British Standard Specification BS 559 intended for professional telecommunications receivers, is now available with either 183 or 500 output rpm, and with 10:1 or 5:1 reduction. It provides an 80:1 reduction ratio, between coaxial input and output shafts, and consists of a 10:1 friction drive and an 8:1 gear drive in series. Limiting output torque is 24 oz.-in. (1.7 kg.-cm.).

Further information can be obtained from Jackson Brothers (London) Ltd., Kingsway, Widdowson Road, Chislehurst, Kent, or to the Australian agents, British Merchandising Pty. Ltd., Shaw House, 49/51 York Street, Sydney, N.S.W., 2000.



To Fig. 1: top left; Fig. 2: bottom left; Fig. 3: top right; Fig. 4: bottom right.

AROUND THE TRADE

Our good advertisers Hy-Q Electronics Pty. Ltd. announces the opening of their office in Sydney from Feb. 1 in Suite 204, 204 Victoria Ave., Chatswood, N.S.W., 2087, telephone (02) 418-2397 (Telex 22631), under Mr. Jeff Wratten, Area Manager for N.S.W. and A.C.T., providing technical and sales assistance to their many clients in these areas.

From Ball Electronic Services and from "Ohm" Magazine comes news of a raffle to win a Yaesu Musem 7101 for just \$152.00. Further details from "Ohm" Magazine available through F.E. Publications, HARTS, of Hong Kong, or from Fred VK9P31, the recipient of the proceeds towards a tractor for the Airman's Memorial School, Ewase, New Britain. Ball Electronic Services are Australian Agents for Yaesu Musem and offer both sales and service.

Andrew Antennas of Melbourne announce a successful \$750,000 contract P.M.C. Dept. to supply and install equipment for the Darwin Mt. Isa radio telephone link, comprising 105 microwave antennas on 48 towers due for completion early 1974. The 10 and 12 ft. dish antennas are for manufacture at their Reservoir plant where they operate Australia's largest metal spinning machine.

SUPPORT YOUR ADVERTISERS!

Support yourself also by saying you saw it in "Amateur Radio"

FED REPEATER SECRETARIAT

(Continued from Page 8)

Region 3

ZL repeater channels: 145.8, 145.65, 145.7, 145.75; ZL simplex channels: 145.8, 145.85, 145.9, 145.95, 146.0 (only 145.85 and 146.0 to be used);

VK simplex repeaters: 145.75, 145.8, 145.85, 145.9, 145.95, 146.0 (Ch. 4);

VK repeater outputs: 145.6 (Ch. 1), 145.7, 145.8, 145.9 (Ch. 4);

VK repeater channels: 145.85 (Ch. A), 146.0 (Ch. B);

Satellite: 145.8.

If a segment were to be set aside it would appear that the present A-O-B selection of 145.98 MHz, centred frequency, plus or minus 25 or 30 kHz, is best. Whilst this is in the part of the band occupied by Region 1 becomes a problem for the Federal Council operations. It is as unlikely that the Germans would enthuse about closing down or shifting their repeater frequencies as we are.

The following Ch. systems are current in VK: Adelaide, Geelong, Gippsland, Sydney, Newcastle (not yet in use) and Northern Tasmania (temporary allocation).

There is a Federal Convention to be held this Easter in Melbourne. A policy is needed on future Australian involvement in the Amateur satellite programme during the frequency of our systems. Arising from this would be

the frequency segments in the area for International satellite work and the policy to be adopted if World Agreement places the International segment within the present Australian allocation. Ought we to move all our systems now outside the International segment? The policy answers to these and allied questions should be discussed NOW by interested parties and the decisions passed on to your Federal Council for his guidance during the Convention.

Other questions which the active v.h.f./u.h.f. operator should be considering are:

- (1) The necessity for band planning so that all modes and systems can be accommodated without undue confusion.
- (2) The need to determine a beacon policy so that the development, location, method of operation and frequencies to be implemented to achieve the best possible results for Amateur and scientific uses.
- (3) It was suggested that the 2 mX simplex Channels A and C be altered by 4 kHz, from their present frequencies so as to become 145.85 and 146.15 MHz, respectively. Is there any desire for this move?
- (4) The relative need to consider the adoption of a third repeater channel if the co-channel interference in the Melbourne area becomes too great. If one is adopted it would have to fit into a national scheme so that all users could equip themselves to suit.

Sub-Editor: DON GRANTLEY
P.O. Box 222, Penrith, N.S.W., 2750
(All times in GMT)

These notes are being written on Dec. 15; the calendar says that summer has arrived, however a glance out of the window shows that there is a mistake someplace. Our glorious Blue Mountains are black today, a condition which seems to prevail in the DK bands at the present moment. I have noted some good signals coming in on 15 and 10, and the time of writing is 12:00, so I open to the East Coast of America and the Pacific. As a matter of interest, the New Zealand t.v. is belting in on Channel 0 with 5 by 9 sound and a trace of picture.

As the closing date for the February issue is well before the end of the month, I have nothing from the VK gang at this early stage, and thus the basis for all notes in this issue will be Geoff Watts DX News Sheet and the Florida DX report.

Operation by CR5XX from Sao Tome had been promised for Dec. 3, but a late report said it had been delayed until Dec. 12. The operators were CR6GA and XX; QSL information s.s.b. QSOs to WA3HUP and c.w. to CR6NN.

Yonten ACSTY has been reported on 14205 with 487PB acting as MC, also said to be on 14024-030 c.w. with the W6 stations at 16020. Hudson expects to be assigned an official I.T.U. ACSTY shortly.

On 14205, W6 and CE9X and Clipperton are on a list of possible operations for Signal One. One operation with Larry K2JXP/6 as one of the operators in 1972.

DJ0EJ from Borkum Lighthouse in the Eastern Frigate is currently active for a few days and asks that all QSLs for this operation go to DK3JQ. Another DJ station who has been travelling around is DJ9QT who has just been on from CT3. He asks that all QSLs for this operation be sent to EA8OK be sent to the home QTH.

GB3MSA operating from Poldhu and VB1MSA from Signal Hill were active from Dec. 11 to 16, the former by the Cornish Radio Club and the latter by the Society of Newfoundland Radio Amateurs under the direction of the late VE1FX. 15 to 80 metres were used on this occasion to commemorate the 70th anniversary of Marconi's first Trans-Atlantic wireless message on Dec. 12, 1901. A special QSL via S.O.N.R.A., Box 1235, St. Johns, Newfoundland, will be issued. The special call letters of the special invitation to all who work both stations during the period of operation. Other special stations were DL6EM, GB3MNI and GB3PMA.

Some news from ET3 says that ET3USC is frequently active from 1105 on 21 Mhz. c.w., QSL to Lee Spencer, Box 261, Company "A", U.S.A.F.S., Asmara A.P.O., New York, 09843, or to his WA4AGT home QTH. Another station, Dave ET3DS, who is ex 8R1S/5H3MA now has a new manager, VE2DCY.

HK0BKX from San Andres is a regular in the YL net 14332 s.s.b. 1800z with manager WA6AHF. WA6UCW/HK0 was due to go there for 160 metre operation from Dec. 25 to Jan. 7. HB0XHS as far as we here are concerned has KO1QM as manager.

Prefixes of interest seem to be in the news every week. PJ3JT and BF were on for the contest week-end up to Dec. 1. W1BIB and K1RZ were on for the week-end of Dec. 7 by PJ2HT from Bonaire. QSL to home QTH. K. de Wit. Box 875. Curaçao, Netherlands. Carl TU4AA with another QSL to home QTH. V. de Wit. Box 100. Dec. 16 to Feb. 29 from Birmingham Alabama, whilst WM1NSA to Dec. 13 from Framingham, Mass. Y2AGZ has been issued for some time. The following are also in the news: A. Baron, Kabul (I.D.), C/o. Dept. of State, Washington D.C. 20521. USA. HS0UDN is a club station, address which is via the HS0UDN. A. Baron. Kabul (I.D.), C/o. Dept. of State, Washington D.C. 20521. USA.

Some current or recent activity from the VP cut areas commences with VP1BH on all bands and very active on 80 metres, manager is VE2AKZ. VP2DAE from Dec. 20 to 24 by WA3HRV on all bands; manager is K3RLY. VP2VAI Dec. 4 to 6 by the KP4 boys, also VP2VAG whose manager is VE3GMT or direct to Box 440. Tortola, B.V.I. Pete VP2VAM has the same manager. Other VP operation is in the form of VE2R on 40m; Guilla; WB2ZMK. VP2GI from Grenada, address is Box 421, St. Georges. VP2KF from St. Kitts, now has VE2DCY as manager. From down in

VP8 we note that VP8LK is on Adelaide Is., where he has been for most of 1971. His cards go to G3NOM. Mike VP8MH is on from Argentine Is.; QSL to M. Hinchcliffe, 40 Elmwood Drive, Thornton-Cleveleys, Lancs., whilst VP8MJ is also there.

Geoff Watts is anxious to have all QTH and QSL information for all stations currently active in the VP8 call areas. He would appreciate a line to QTH, 62 Belmore Rd., Norwich Nor 72-T, England.

VR1, British Phoenix, has VRIAB giving us some fine operating. He is regularly in the Pacific net, and asks for his cards to be sent to K3RLY who also handles this chore for VRIAC. VRIW due to go QRT about mid-Dec.: QSL to W6CUP. Danny VRIAA, of course, is still active from Gilbert and Ellice, and I mean active. 406 QSOs between August and December, 75 per cent. being on s.s.b., so he is concentrating on c.w. QSLs also handled

Bill VQ9WF currently active from Chagos using 350 watts to a three element beam, expects to return home to his WA2UUV locale in 1972. He asks for all cards to go to his home address or to W4NJF after his return, which will be very shortly.

Ascension Island is not very often in the news, but there is usually some activity from there. ZD8KO, Keith Orchard, C/o. B.B.C., Ascension Is., South Atlantic (QSL with two IRCs). ZD8CS, QSL to K1BTD; ZD8/JK, manager WA3FNK, are the regulars, whilst ZD8TS returns to his G3ZST QTH in Dec.

5N2AAN and 5N2ABG are QRV 7005 c.w. week days 0545-0600. ABG will be on 14180 0600-0630 beamed to the Pacific on the long path and asks for no breakers.

K54CJ, Swan Is. operation by KV4AM from Dec. 8 to 21, has been reported under way successfully, and they ask for all QSLs to the home QTH. Transfer of the Island to Honduras has still to be approved by the U.S. Senate, but as they are only 100 miles from the HR coast, they will cease to count as a separate DX country once the transfer has been completed.

Still an abundance of K stations populate the bands from the Pacific areas. KB6DB, manager K3RLY; KJ6CF, Box 101, A.P.O., San Francisco, Calif., 96305; KM6DX, L. Collins, Box 100, U.S.N.A. Commsta, F.P.O., San Francisco, Calif., 96514, active from Midway, whilst down in the colder regions WB6CUB/KC4. Gary, is located on Byrd Station. His QSLs go to K0YKJ.

As I am unloading out of space here I will briefly list some stations just appearing in the news sheets. Their managers, where known, will follow the call in brackets. HSIABD (KQSHS), JX1AK (LAIFH), OHNT from Nov. 27 to 28, QSLs direct. TCGYN, who is ex YAIWB, QSL manager DLDFD, SH3LZ (G3-USY), 9L1VW (W9FTU), VK9CH on Bougainville to WA6MRG, this counts as New Guinea; VR5FX (ZL2AFZ), 9M3FME (W1YRC).

Silent Key—W5LW, Th. E. La Croix well known in the DX field, passed away on Nov. 26, while Bob Rowley, HP1BR, whose call was also prominent among the DX'ers, died on Nov. 28. I would like to add a word here in recognition of the fact that K1KJ, after passing a few months ago left a void in Amateur circles. I would like to take this very belated opportunity of acknowledgment of a very good person. Bob Rowley and Th. E. La Croix Graham was one of many VK2 Amateurs who gave me help and encouragement when I turned to Amateur Radio as a relaxation after a career in one whom I will always remember as a friend.

AWARD

Minor States Certificate. For working countries in the list C3 (PX), HB0, HV, LX, MI (9A) and 3A. DX stations need any two for the basic award. GCR list plus 10 IRCs to OE7PR, Herbert Prettnner, Pradlerstr 68, A-6020, Innsbruck, Austria. This award, which to me seems rather pointless and expensive, is also available to SWLs.

Sargenda Award. For working Sardinia stations since 1st June, 1965. DX stations need 10 points on the basis of one point per IS station per band. GCR list plus 10 IRCs to Sezione A.R.I., Box 25, Cagliari, Sardinia, Italy.

Worked All GYTMO. For working six KG4 stations since 1st Jan., 1971. GTC list
W.A.G. Award, C/40-45, G4EY, PGR Box 551,
F.P.O., New York, 08593.

Worked Sweden Award. There are five awards here. Worked 80 SM on 80 meters, 41 SM on 40, 20 SM on 20, 15 SM on 15 and 10 SM stations on 10 meters. Each application for any single award must include all SM call areas, SM1 to 0, SK or SL stations also counting. GCR list plus six IRCs to Gotland Island Radio Club, Box 336, S-621-03, Visby 3, Sweden.

Extremely hard to get the five, but who knows. The awards are available to SWLs on a heard basis.

Amendments. For the All Capital Cities Award which I prepared for the January issue, please amend custodian to read DL2HQ or DL9OT. Add Liberia and Sth. Africa to L.A.R.U. region 1 award.

Awards are always a subject of interest. In the past many of my contacts have expressed their appreciation of "A.R." for publishing something that they would not otherwise see. I am of mine in England who is rather involved with the C.H.C. set-up, is forever mentioning the "A.R." book and the awards for which he is custodian. Personally I feel that the award situation has become similar to the D.X.C.C. list, somewhat top-heavy. I think that the award situation is much in favour of them as an incentive, but any goal has to be worth getting and I feel that the award situation is not worth it. The awards are not worth the paper on which they are printed. They are so easy to get and the cost is so high, that one does not have to look for them. For the most part, the awards are part of the general Amateur Service, and as such, I write them up. This does not imply that I agree or disagree with the ethics of many of the awards. I think that an award looks too ridiculous or the cost is out of proportion to its value, then I forget it.

DX-PEDITIONING HOT NEWS

Alf Matthews, VK3ZT, comes up with plans being formulated by John Martin, VK3JW, for an all-Australian activation of Mellish Reef, and, if A.R.R.L. agrees to new country designation, of Frederick Reef, in May or June this year.

Mellish Reef, thanks to earlier efforts of Larry Pace, VK4CGB (now K2IXP/8) and John was given new country status last year. Both would be new "countries" and are believed never previously activated.

Dates and plans are still tentative. Support is solicited from VK operators to enable the operation to get under way. Apart from anything else, a boat is being sought so as to coincide with the most favourable wx conditions in the changeable Coral Sea. They want to make this an all-Australian effort although overseas interests are most keen to participate. The DX equipment is also being sought to make this DX contest a bands (including 160 mc) as well as s.s.b. and c.w.; generators and other gear would be needed quite apart from running stores.

John also has made application for a possible "second string" operation for an all-Australian DX-pedition to China and Tibet, but here again some assistance is required.

How about it? Can you help in any way? If so, now is the time to come to their aid. Mellish and Frederick Reef may not be as tough a proposition as Rockall in the Atlantic, but it will be hard work. Please write now to VK3JW or VK3ZT (QTHR) or telephone 03-688-2897 (a.h.) to Alf for further details.

CONTEST CALENDAR

Feb. 12/13: John Moyle Memorial National Field Day Contest, 1972 (see Nov. "A.R.," p. 12).

Feb. 12/13: ZL V.h.f. Field Day.
Feb. 12/13: R.S.G.B. 1st 160 mx Contest.
Mar. 11/12: R.S.G.B. B.E.R.U. Contest.
Mar. 25/27: B.A.R.T.G. Spring R.t.t.y. Contest.

SUBSCRIPTIONS DUE

All members of the W.I.A. are reminded that annual subscriptions are due and should be remitted to the office of the Federal Manager, P.O. Box 67, East Melbourne, Vic., 3002, as early as possible.

"A.R." will not be despatched to anyone listed as unfinancial and as back copies may not be available on request some discontinuity may occur.

The error in this Notice on page 15 of Jan. "A.R." is regretted.



MOONBOUNCE ON 144 MHz. FIRST VK TO VE CONTACT

Whilst others have been making good use of 32 MHz Sporadic-E propagation, Ray VK3ATN succeeded in making two contacts via the moon on 1/14/72, on 144.04 to K5MYC and on 144.004 to VE7BQH.

Ray started to transmit at 2140 to 2145 (his normal transmitting period) and stood by for three seconds, but back came W5MYC, and operated with him from 2142 to 2150, signals 438; then from 2150 to 2155, signals 438. Signals continued to be heard until 2205-2208, by which time the moon was getting too high for antenna.

Ray reported the moon "window" for contact via the moon as being rather unusual, and the longest he had experienced to fine effort Ray, and we are glad to be able to rank you amongst the v.h.f. fraternity of Australia.

narrow-band s.s.b. receivers being used—a drifting signal, particularly if a.m. with frequency modulation, is well nigh impossible to receive on a standard tuning receiver. There are at the present time some very poor s.s.b. signals on 52 MHz., signals very hard to tune. It is hoped that some of our receiving stations a chance to improve their signals too, and some of those occupying 20 to 40 kHz. of the band due to shouting into the microphone with the main control on I, come home several consistent offenders on this band!!

Other interesting things to have happened on 52 MHz. during December mostly have been the coming of the VK3ZL and the loss of particular interest to VK3ZL that ZL4 has been worked after a break of quite a few years, with David ZL4GP and Stan ZL4MB mostly active. Stan has indicated he intends doing some portable operation for the greater part of the year on Saturday and Sunday mornings, becoming VK before their L.v. stations commence. Likely operating times will be between 1100 to 1200 hours, frequency 51.900 MHz., and on s.s.b. He may also try 52.007, which is a weak signal, but he has worked down one day when he could hear VK6WA and VK6ZDY but could not get them to tune locally on 52 MHz. That's a long haul to the West and a path not often open, so can understand Geoff's ire! Geoff was a good signal in VK3 this year and worked plenty of stations.

Not content with spanning the Continent twice a week, the Amateurs then turned their beams north on 29th December, and quite a few worked Rex VK3ZAP. Barry VK3ZMW has not forgiven me yet for working Rex over him.

Barry was trying out his new s.s.b. QRP rig (5w.) and apparently tried calling Rex at the same time as I did with my 50w., the result being that Barry VK3ZMW and I eventually make it, which is a pretty fine effort (1855 miles with 5w.). Geoff VK3ZGF/S gave quite a number of contacts for the year from Alice Springs, so there would be quite a few people who worked all States this year, plus VK3Z and four ZL districts, and a few chap.

While all this sort of thing goes on, Wally VK3ZWM plods along with his meteor scatter experiments, and on 11/12/71 worked VK3AAU with the mode, with one burst of 8 to 9 seconds at 5 x 9.

Geoff VK3LTD heard Channel 5A in Wollongong on 12/12/71 and gave a relatively snow-free picture for about 10 minutes. Ch. 5A was also heard rather weakly at my own QTH on the same date at 2000 hrs. This is the first time I have ever positively heard Ch. 5A, and lends some support for my hopes that 144 MHz. VK3LTD will start to come back again next season.

10 GHz. AUSTRALIAN RECORD

On 10.000 MHz. at 1345 on 30/12/71, Des VK3CUP/P located at Black Top Hill, Elizabeth, contacted Barry VK3ZMW/P at Kulpura, South Hummocks—distance 61 miles. Signal strength at VK3CUP 5 x 9, and at VK3ZMW 5 x 5. VK3CUP 10.000 MHz. and at VK3ZMW on 10.010 MHz. I am indebted to Barry for the following report:

"The weather was overcast with an extreme low cloud cover, no moon, and the sun location could not be seen. Wind and rain was the forecast, and tossing the coin was the deciding factor whether to go or not. A

2 mhz link was used as a back-up with a 4 c. yagi, which proved invaluable for determining the correct direction for 10 GHz. Des VK3CUP first located himself at a hill above Salisbury, but no contact was made. After the location was decided, this being Black Top Hill.

"After about 30 minutes and no contact being made, we decided to review the situation. The weather had cleared and Des VK3CUP moved to Port Wakefield, which was then visible from Kulpura. Les' antenna should therefore be in the direct line of Des' antenna swing. Des' antenna was to be too far north. A re-alignment of his antenna and contact was made. The parabolas did not seem to be too directional in this case, and a slight swing could be made with very little change in signal.

The equipment consisted of all solid state gear except the klystron, VK3CUP used a separate transmit and receive dish, and VK3ZMW one single dish. Power output from the transmitters about 100 mw. This contact was made after some 20 years of building, trying, modifying, trying, etc., made Des VK3CUP a bit (Very Happy Fellow).

Congratulations to both of you, this distance will set a target for someone else to better. We certainly have an Australian record and may no longer be bettered by any anyone.

GENERAL

From Bob VK3AOT comes an item or two, mentioning that on 27/12/71 Peter VK3BFG heard Phil VK6PF at 419 on 6 mhz and they kept their interest in doing so. On 28/12/71 ship was evident and allowed some operators their first contacts from VK3 to VK1 by working Eddie VK6VF. About 2300 hours, VK3ZL by short skip. On the same day, VK3ZTK worked VK3ZAP. On 432 MHz, Ron VK3AKC has worked VK3ZL and VK3ZMW. Bob also advises that the VK4 beacon which is temporarily off the air due to an impending circuit change, a new electronic keyer will then be used. He also used Kerry VK3SU at Ceduna, on 30/12, had heard VK6VE, the 2 mhz beacon near Albany at 58, and on 31/12 had heard VK6LW. VK3ZVF had been 55. No contacts had been made.

John VK7JIV writes to advise Col VK7KW has worked VK3ZL in Antarctica in January and has the call VK3ZL and John VK7JIV has his QSL machine. Col has, or has access to, equipment to work the Australia 144-432 MHz. band. AMAT 144-432 MHz.

The VK3 Field Day (5/12/71) proved a great success. The band opened to VK3 for an hour and a half, and up to 16 stations were worked from there on 52 MHz. Few contacts also to VK2 and VK4.

So, generally speaking and looking back over the past year, the past year has really had a ball and with gradual improvement in equipment, distances covered must inevitably increase no matter what the frequency. Consequently, I have not really thought for the month as more particularly a short joke taken from the pages of the W.A. Group News Bulletin, and which appeared to me: "Speaking of gifts, did you hear about the character who gave his ma-in-law a 'Jugus' for Christmas? Both he and the antique were 75."

Finally, it appears the deadline for copy for "A.R." has been altered. My notes now need to be in by the 15th of the month, so it will be necessary to ask correspondents to have their information in my hands by 28th of the month. Your help in this direction will be much appreciated. 73, Eric VK3JLP. The Voice in the Hills.

Stop Press.—The I.P.S.D., supported by the W.I.A., has received P.M.G. approval for the first time in Feb. 1 to establish two keyed radio beacons to test and propagate experiments between Antarctica and Australia. The mode is 242 on 200w. final input and the call signs, frequencies and locations are:

VK6GR—33.10 MHz., Casey.

VK6MA—33.20 MHz., Mawson.

VK6ZS Macquarie Island has started transmitting on 32 mhz, but the 32 mhz and will be on between 7 and 9 p.m. Melbourne time, is looking for contacts.

During the VK3 Field Day on 2/12/71 Doug VK3ZL worked ZL3AR, ZL3ZL and ZL3AR, 2 on 2 mhz, probably via Es. VK3ZLZ was using a.m. on 144.21 MHz. and was heard by VK3ZLZ. On 30/12/71 Bob VK3ZDX in Adelaide had a scratchy contact with Aubrey VK6XY at Albany, a distance of almost 1200 miles on 144.21 MHz. and VK3ZLZ. On 31/12/71 VK3ZDY worked VK6ZVF/6 who was portable near Mt. Barker, and VK6XY. These contacts are believed to have been the last of the year. Three stations now active in Albany on 2 mhz, no doubt many more transcontinental contacts will be achieved over the next couple of months.

AMATEUR BAND BEACONS

VK0	52.525	VK0MX, Mawson.
VK2	52.100	VK0ZVS, Macquarie Island.
VK3	53.839	VK0PF, Casey.
VK3	53.839	VK3JLL, Sydney Service Div.
VK3	144.700	VK3VE, Vermont.
VK4	52.400	VK4WJZ, Townsville.
VK4	144.390	VK4VU, near Toowoomba.
VK5	51.000	VK5VU, Mt. Lofty.
VK5	144.800	VK5VF, Mt. Lofty.
VK5	52.066	VK6VF, Bickley.
VK5	52.900	VK6TS, Carnarvon.
VK5	52.950	VK6VE, Mt. Barker.
VK5	144.500	VK6VE, Mt. Barker.
VK5	145.010	VK6VE, Bickley.
VK7	144.800	VK7VF, Devonport.
VK9	144.600	VK9XJ, Christmas Island.
ZL1	143.100	ZL1VHF, Auckland.
ZL2	143.200	ZL1VHF, Wellington.
ZL3	143.300	ZL1VHF, Christchurch.
ZL4	145.400	ZL1VHF, Dunedin.
JA	52.500	JA4VJ, Japan.
WB	52.000	WB6G, California.
KH6	50.101	KH6EQ, Hawaii.
	50.615	KH6EQ, Hawaii.
HL	50.100	HL5WJ, South Korea.
ZK	50.100	ZK1AA, Cook Island.

Some changes to the beacon list this month. Firstly, a letter from Mr. J. K. Walter, of the High Latitude Section of the Commonwealth Bureau of Conspicuous Precision Service Division, advises a frequency change of the Casey beacon from 53.54 to 53.839 MHz. The present power of that beacon is 11 watts to a four watt beacon, but this has been expected to be increased to 100 watts shortly. Mr. Walter also confirms that two 6 metre beacons will be taken to both Casey and Mawson in 1972, both with an output power of about 400 watts. Call signs and frequencies will be advised when the P.M.G. Dept. finally gives approval.

The second item in Mr. Walter's letter indicates that several Sydney Amateurs reported reception of a 6 metre beacon with a call sign which he is predicted to be VK0 (probably VK0PF at Casey) at 52.525 MHz. on 21/11/71. At this time and for the following two days Phil VK0PF at Casey reported reception of a 6 metre beacon. These reports are not definite, but they do suggest a distinct possibility of the occasional use of frequencies below 50 MHz. for beacons in Australia. If any readers have received the Antarctica beacon, Mr. Walter would be pleased to hear of it. Address: Assistant Director, I.P.S. Division, 182 Goulburn St., Darlinghurst, N.S.W., 2010.

While we are talking about beacons and the Antarctic area in particular, am pleased to report the first hearing of a VK0 beacon, on Macquarie Island at 1945 hrs. on 2/1/72 by Ron VK4RO. Call sign VK0ZVS, freq. 52.100 MHz. The signal was very weak, but after fading into noise, signs. S1-2. Further details of this station from Chris VK0RC and Tony VK0KA indicate a new pattern of use. The station is now used up to 30 ft. Tape loop connected via voice circuit of FT200 gives "CQ VK0ZVS Macquarie Island" then pauses for 35 seconds while listening for stations in the region. If you hear this station, you must reply in the pause period with an accurate signal as the receiver bandwidth is very narrow, and the receiver is set to 5 w.p.m. (due to aural flutter effects making a.m. and s.s.b. signals unreadable). Tony indicates an interest sufficient to go ahead with a new pattern of use of the station for contact purposes, but generally for beacon purposes the 20w. power level will be used. Good luck to Ross, hope you can make it a two-way next time.

32 MHz. DX-72

The 1971-72 Sporadic-E DX season for 52 MHz. has certainly been a very good one. Something has been available almost every day since mid-November. Several things have contributed to this, but the most prominent being the greatly increased number of stations using s.s.b., mostly transceive. Coupled with this, more and more stations are using a.m. stations are still "CQ DX"—listening this frequency before tuning," indicating a greater awareness of the increase in transceive operation.

Two further points come out of this course. One is that all stations will need better frequency stability with a greater number of

NEW CALL SIGNS

OCTOBER 1971

VK3GZ—G. J. Zimmer, 1/15 Clendon Rd., Armadale, 3143.
 VK3JK—C. W. Gliddon, 9 Gloria Ave., Dandenong, 3175.
 VK3MA—D. L. Bradford, 2 Rahund Rd., Doncaster, 3108.
 VK3YH—A. A. Varley, 65 Lasiandra Ave., Forest Hill, 3131.
 VK3ADJ—B. Hocking, 45 Wallace St., Morwell, 3840.
 VK3AFM—F. M. Wrobel, 38 Hilton St., Glenroy, 3046.
 VK3AFY—O. Hocking, 62 Thomas St., East Brighton, 3187.
 VK3AMQ—M. G. White, 62 Peter St., Box Hill North, 3182.
 VK3ASM—K. Moore, Lot 17, Mast Gully Rd., Upwey, 3158.
 VK3ATG—Footscray Institute of Technology Radio Club, Ballarat Rd., Footscray, 3011.
 VK3UAU—D. D. Tanner, Lye & Dixons Rd., North Clayton, 3188.
 VK3AZG—L. B. Williamson, 62 French St., Lalor, 3073.
 VK3AZT—B. Payne, 97 Ringwood St., Ringwood, 3134.
 VK3BFW—W. F. Colborne, 80 Hill Rd., North Clayton, 3188.
 VK3BGC—R. G. Clay, 13 Brown St., Traralgon, 3844.
 VK3GS—K. G. Slade, 23 Russell St., Greensborough, 3082.
 VK3GY—W. J. Kirkhope, 271 High St., Lower Templestowe, 3167.
 VK3JF—C. C. Parker, 7 Wellington St., Middle Brighton, 3186.
 VK3ZF—W. A. White, 1861 Dandenong Rd., North Clayton, 3188.
 VK3ZWP—C. J. Gamble, Lot 19, Rosemar Circuit, East Rosanna, 3084.
 VK3ZYR—R. H. Young, 1 Bland Ave., Dandenong, 3175.
 VK3ZZX—J. L. Watkins, 4 The Grove, South Camberwell, 3124.
 VK4LH—C. C. Kelso, 46 Gavegan St., North Bundaberg, 4670.
 VK4CLA—R. C. Atkinson, 136 Marshall Lane, Bundaberg, 4670.
 VK4CZJ—G. J. Castledine, 10 Park Rd., Arana Hills, 4054.
 VK4ZJV—R. J. Williams, 20 Nerang Coast Rd., Miami Keys, Broadbeach, 4217.
 VK4ZWP—P. L. Williamson, 11 Harley St., Enoggera, 4051.
 VK5JV—J. W. Williamson, 2/33 South Esplanade, Glenelg, 5045.
 VK5NU—G. A. Dowse, C/o. Supt. Radio Branch, 30 Flinders St., Adelaide, 5000.
 VK5UU—Z. P. Azary, C/o. Supt. Radio Branch, 30 Flinders St., Adelaide, 5000.
 VK5UV—R. J. Cunningham, 59 Teusner Dr., Morphett Vale, 5162.
 VK5VZ—C. G. Wilson, 50 Wilcox Ave., Prospect, 5082.
 VK5ZT—D. J. Brown, 17 Kentish Rd., Elizabeth Downs, 5112.
 VK5ZBB—T. B. Boden, 12 Cunga Ave., Park Holme, 5043.
 VK5ZPS—P. R. Smith, P.O. Box 49, Moana Beach, 5169.
 VK6DQ—W. R. Woodley, 52 Marrawa Way, Mannum, 5107.
 VK6EG—G. A. Warner, 82 Broadway, Bassendean, 6054.
 VK6EO—J. Sollis, 33/59 Herdsman Pde., Wembley, 6104.
 VK6CZW—O. J. Willoughby, 46 View Terrace, East Fremantle, 6158.
 VK6ZGK—G. J. McDonald, Station: 36 Hope Cres., Leamurdie, 6079; Postal: 1 Markham Way, Mordialvie, 6097.
 VK6ZHI—P. A. Bradshaw, 24 Riga Cres., Willetton, 6155.
 VK6ZIW—A. D. Wallace, Station: 30 Sulman Rd., Wembley Downs, 6014; Postal: P.O. Box 23, Scarborough, 6019.
 VK6ZJF—J. G. Farnell, Station: 41 Brighton Rd., Scarborough, 6079; Postal: P.O. Box 87, Scarborough, 6019.
 VK7ZGS—G. A. Simpson, 217 Best St., Devonport, 7310.
 VK8RM—R. W. Maginness, 56 Gregory St., Parap, 5780.
 VK9AJ—R. Nimmo, C/o. S.I.L., P.O. Ukarampa.
 VK9EL—E. Seumahu, P.O. Box 793, Lae.
 VK9GS—G. Sodencamp, P.O. Box 3155, Port Moresby.
 VK9HT—Hitech Radio Club, P.O. Box 793, Lae.
 VK9VG—G. W. van Galen, P.O. Box 723, Lae.
 VK9XW—G. C. Woodford, Christmas Island, Indian Ocean.
 VK0JV—C. S. Perger, Casey Base, Antarctica.

ALTERATIONS

VK5OQ—J. F. Dalstead, 14 Firth St., Doncaster, 3108.
 VK3SJ—A. J. Simms, Forest Office, Gellibrong River, 3239.
 VK3AKQ—K. J. Echberg, Lot 94, Thurlow Dr., Safety Beach, 3936.
 VK3AVU—C. R. Lobb, Addition of initial R.
 VK3AWF—W. J. Falconer, 30 Stanley Gr., Canterbury, 3126.
 VK3AXR—C. G. Williams, Flat 6, Parton Crt., Glenhuntly, 3163.
 VK3BDF—R. N. Field, 1242 Burke Rd., North Balwyn, 3104.
 VK3WIA—Wireless Institute of Australia (Federal Executive), 19 Cannes Gr., Beaumaris, 3193.
 VK3ZCQ—G. D. Johnson, 56 Holmes Rd., Moonee Ponds, 3039.
 VK3ZCR—B. J. Alsop, "Tree Mist," One Tree Hill Rd., Ferny Creek, 3786.
 VK2ZKL/T—A. A. Slamin, Addition of T.
 VK3ZPS—P. J. Armstrong, Church Rd., Yulecrt, via Hamilton, 3306.
 VK3ZFP—F. W. Banks, 901 Centre Rd., East Bentleigh, 3165.
 VK3ZTA—D. J. Laidlaw, 4/24 Northam Ave., Highton, 3216.
 VK3ZWC—T. J. Conboy, 793 Ferntree Gully Rd., Wheelers Hill, 3170.
 VK4H—R. J. Thorn, 3 Madison St., Sunnybank, 4109.
 VK4IS—A. L. Stehn, Station: Bill Bld Rd., Nambour, 4690; Postal: M.S. 1505, Nambour, 4690.
 VK4KD—K. D. Ayers, 42 Thomas Dr., Chevron Island, Surfers Paradise, 4217.
 VK4Q—C. R. Rutherford, 79 Park Rd., Yeronga, 4104.
 VK4ZGZ—G. D. Dixon, 9 Emily St., Deagon, 4107.
 VK5SR—G. W. Luxton, 203 Belair Rd., Torrens Park, 5062.
 VK5TA—R. A. Couzens, 20 Catalina Rd., Elizabeth, 5112.
 VK5WI—Wireless Institute of Australia (S.A. Division), C/o. C. G. Luke, Loma Linda Gr., Wattle Park, 5066.
 VK5WR—W. L. Russell, 33 Devonshire St., Walkerville, 5081.
 VK5YA—J. M. Guyas, 67 William St., South Plympton, 5039.
 VK5ZM—M. R. Burford, 261 Belair Rd., Torrens Park, 5062.

VK5ZKE/T—J. L. Jones, 70 Clayton Rd., Salisbury East, 5109.
 VK5ZKP—K. J. Pearce, 25 Fira Ave., St. Peters, 5069.
 VK6ZK—T. M. Stanicic, C/o. M.K.M.O. Camp T. Roebourne, 6718; Postal: P.O. Box 850, Roebourne, 6718.
 VK9MM—M. McBride (Fr.), C/o. Capuchin Mission, Tari, S.I.D.

CANCELLATIONS

VK3FS—A. J. O'Brien, Deceased.
 VK3GJ—L. F. Schmidt, Transferred to Qld.
 VK3ADJ—D. L. Bradford, Now VK3MA.
 VK3ALV—L. G. Watson, Not renewed.
 VK3ALV/T—L. J. McKay, Not renewed.
 VK3BBI—R. C. Marschke, Transferred to Qld.
 VK3BEM—G. N. Marks, Transferred to Port Moresby.
 VK5YBL—R. K. Peters, Transferred to N.S.W.
 VK3YFD—F. M. Wrobel, Now VK3AFM.
 VK3ZEM—Footscray Institute of Technology, Now VK3ATE.
 VK3GA—T. D. Gregory, Transferred to Qld.
 VK3ZHL—C. W. Gliddon, Now VK3JK.
 VK3ZJV—R. J. Williams, Now VK4ZJV.
 VK3ZNG—K. Moore, Now VK3ASM.
 VK3ZQL—J. A. Blanch, Not renewed.
 VK3ZWP—B. Hocking, Now VK3ADB.
 VK3ZX—G. J. Zimmer, Now VK3GZ.
 VK4DT—J. H. Ginsberg, Transferred Interstate.
 VK4UL—L. P. Hubsher, Deceased.
 VK4US—P. L. Hubsher, Deceased.
 VK4ZK—C. C. Kelso, Now VK4LH.
 VK4ZRT—R. C. Atkinson, Now VK4ZA.
 VK5AW—D. A. Carthew, Not renewed.
 VK5IN—K. V. Hanson, Not renewed.
 VK5TJ—J. B. Dennis, Transferred to N.S.W.
 VK5XC—E. F. Leist, Not renewed.
 VK5ZAT—C. A. Pay, Not renewed.
 VK5ZCT—R. J. Cunningham, Now VK5UV.
 VK5ZFR—P. Francis, Not renewed.
 VK5ZGU—J. W. Cowles, Not renewed.
 VK6EJ—E. J. R. Coates, Not renewed.
 VK6MD—D. Scott, Left country.
 VK6PA—K. C. Parker, Transferred to T.P.N.G.
 VK6RW—R. J. Watson, Not renewed.
 VK6WQ—W. M. F. Wattleworth, Not renewed.
 VK6ZCZ—J. J. Hosie, Not renewed.
 VK6DW—D. W. Stephens, Returned to U.S.A.
 VK6SS—S. S. Stephens, Returned to U.S.A.
 VK6ZRM—R. W. Maginness, Now VK3RM.
 VK9EP—E. A. Parker, Not renewed.

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DIVISIONAL NOTES

NEW SOUTH WALES

NOMINATIONS FOR NEW COUNCIL, 1972

Article 6: "Nomination of a candidate for election to the Council must be received by the Secretary in writing not less than 21 days before the Annual General Meeting of the Institute, with an intimation in writing that such candidate is willing to act. Each nomination must be signed by two members proposing the candidate."

(A member means a member of the Institute in Grade A, that is, a Full Member of the Institute.)

Article 67: "The instrument appointing a proxy in writing not less than 21 days before the appointment and shall be deposited at the Registered Office of the Institute at least 24 hours before the time appointed for the Meeting at which the person named in such instrument proposed to vote in respect thereof."

The "Registered Office" of the N.S.W. Division is located at 14 Atchison Street, Crow's Nest, N.S.W. 2063, and NOT Box 1754, G.P.O., Sydney, N.S.W. 2001.

NOMINATION FORM—COUNCIL ELECTION MARCH 1972

We, the undersigned, being Full Members of the W.I.A., N.S.W. Division, do hereby nominate for election as a Councillor of the N.S.W. Division for the year 1972/73.

Signed: (1) Usual Signature.

Signed: (2) Usual Signature.

I am willing to act as Councillor of the W.I.A., N.S.W. Division, if elected by members to do so.

(Signature) Date

This form must be received by the Secretary not later than 3rd March, 1972.

FORM OF PROXY

I, _____ of _____

the Institute, hereby appoint Mr. _____

also a member of the Institute to act for me

as my proxy and in my name do all things

which I myself being present would do at

the meeting of the Institute to be held at _____

on _____

(Signature) _____ Witness

ELECTION OF COUNCIL

Your earnest consideration is requested for this important occasion, the election of your official representatives to Council. Past years have shown a lack of interest, and it would be a note of confidence in the future if we had an active and virile election. This of course would provide an active and virile Council. Let 1972 be a year to remember.

VK2 DIVISION

- Mar. 3: Closing date, nominations for the Council.
- Mar. 24: Friday, Annual General Meeting, 7.45 p.m. at 14 Atchison St., Crow's Nest.
- Mar. 25: Saturday, Dinner at Artarmon Bowling Club, \$5 per double.
- Mar. 26: Sunday, Convention/Field Day.

VK2 DIVISION, W.I.A.

ANNUAL DINNER

to be held at
ARTARMON BOWLING CLUB
Burra Road, Artarmon
on
SATURDAY, 25th March, '72
at 7.30 for 8.00 p.m.

Tickets: \$5.00 Double
are available from the Admin. Secretary.
Dress: Black tie.

The next monthly general meeting of the VK2 Division will be held on Friday, 25th February, 1972. The lecture is the annual lecture supplied by the V.h.f. and T.v. Group and the lecturer will be Mr. James Rowe, VK2ZLO, the Editor of Electronics Australia. Mr. Rowe will talk on Antenna Matching and Measurements, a topic which will appeal to all members no matter what their particular operating interests may be.

Country members interested in v.h.f. are reminded that the V.h.f. and T.v. Group has now been publishing for some time a newsletter of mainly technical content each month. The v.h.f. Newsletter may be collected from the Wireless Institute Centre, free of charge, or obtained by post by forwarding a 9 x 4 inch stamped addressed envelope to the Editor, V.h.f. & T.v. Group Newsletter, 14 Atchison Street, Crow's Nest, N.S.W., 2065.

Intending Amateurs are advised that a new A.O.C.P. class starts this month at W.I.C. Details of this or the Correspondence Course may be obtained from Course Supervisor, C/o 14 Atchison Street, Crow's Nest, N.S.W., 2065.

South-West Zone.—There is to be a meeting at Leichardt at 8 p.m. on 27th Feb. to discuss the venue and arrangements for this year's S.W. Zone Convention to be held as usual over the weekend of 2nd and 3rd March. If you have problems finding your way, Ch. B will be monitored. Further details from Phil VK2YS.

SUPPORT OUR ADVERTISERS!
Support yourself also by saying you saw it in "Amateur Radio"

VICTORIA

The major event in February is the John Meyle Memorial Field Day on 12th and 13th February. Many stations will be in the field in this event. Both individual portable stations and those set up by clubs will be competing. Most Zones and clubs intend operating and the Victorian Divisional Council will field VK3AIV portable at Point Nepean.

The field day is an excellent opportunity to work from National Parks and it is to be hoped that many stations do this so as to activate as many National Parks as possible. This is one way of generating some interest as many are looking for contacts for the National Parks Award.

Conventions are once more in the news, with the Eastern Zone planning one in early March and the V.h.f. Group organising an Easter Convention at Wandan, East, in the heart of the beautiful berry country behind the Dandenongs.

The Eastern and Mountain District Radio Club will be operating their station VK3ER for the Lilydale Centenary Celebrations from the 12th to 19th Feb. Visitors are welcome and special QSL cards will be issued.

New A.O.C.P. classes commence on 15th Feb. (theory) and 17th Feb. (Morse) and I would like on behalf of Council to wish success to all those attending.

Finally I would like to remind v.h.f. operators that the Ionospheric Prediction Service would like to have details of DX contacts, particularly those made to VK50 and also trans-equatorially. More details may be obtained from the Ionospheric Prediction Service at 162-166 Goulburn St., Darlinghurst, N.S.W., 2310.

Congratulations to Arthur Lock, VK3AUL, of Woodang, on being awarded the British Empire Medal in the New Year's Honours List for services to the community.

The Eastern Zone publicity officer, George VK3ASV/T, reports that their Intruder Watch Group have been very active; that Norm VK3ZQC of Yallourn has been given permission to test and operate an experimental 2 m beacon (144.925 MHz, initially, horizontal halo aerial); that the Latrobe Valley repeater VK3WIR/8 has been moved to Mt. Tassie and the Zone welcomes many new operators recently successful in the exam.

VK3 S.W.L. GROUP

As from February 1972, the VK3 S.W.L. Group will hold only one meeting per month, on the last Wednesday in each month. This replaces the Friday meeting, and will commence on Wednesday, 23rd February, 1972.

Y.R.C.S. VICTORIA

The Council of the Youth Radio Club Scheme in Victoria is now under the Honorary Patronage of Major-General Sir Rohan Delacombe, K.C., M.G., K.C.V.O., K.B.E., D.S.O., K.St.J., and Lady Delacombe, C.St.J.

The following persons constitute the Victorian Divisional Council of the Scheme: Kenneth J. McLachlan, VK3ZDK, Supervisor; Dorothy E. McLachlan, Secretary; Keith A. Nicholas, VK3JAN, Treasurer; Jim Linton, Media Publicity Officer; Bob J. Callender, VK3AQ, Projects Officer; Chris Van-Lint, Education Officer.

The I.R.E.E. Pennant for the best School Club in Victoria was presented on 13/12/71 to the Assembly Hall of St. John's College, Braybrook, to their Radio Club which comprises eighty members. This is the first time the Pennant has been awarded in Victoria. Many certificates of diverse levels—mainly in the Honours range—were also distributed to the students.

Many new clubs are being formed for 1972 and anyone requiring further details should write to the State Supervisor, Y.R.C.S., P.O. Box 39, Mooroolbark, Vic., 3159.

RECIPROCAL LICENSING—BELGIUM

"World Radio" of Sept. 9, 1971, reports that since 1964 Belgium has made the unilateral gesture of granting licences to all, irrespective of officially-negotiated reciprocal facilities. Information about visitors' licences is stated to be obtainable from Rene Vanuyse, O.V.R., Diestreet 52, 1970, Wezembeek-Oppem, Belgium.

EASTERN ZONE, VIC. DIV., W.I.A.

ANNUAL CONVENTION

on
18th and 19th MARCH, 1972

at MOONDARRA G.E.T.H.

Bring your YL or XYL to win some

of the prizes

Bookings and more details from E.Z. Sec.,

P.O. Box 175, Maffra, Vic., 3860.

CENTRAL COAST AMATEUR RADIO CLUB

will hold their 15th Annual
FIELD DAY

at
GOSFORD, N.S.W.

on
SUNDAY, 20th FEB., 1972

PROGRAMME

- 9.30—Mobile Scramble, in six sections: H.F., 6 mxt net, 6 mxt tunable, 2 mxt net, 2 mxt tunable, u.h.f. Log exchange, announcing table before 1 p.m.
- 8.45-10.30—Registration OM 52, XYL on YL.
- 9.30-10.45—Children or full-time students 50.
- 10.00-10.45—Morning Tea provided.
- 10.00—Disposals open.
- 10.00-10.45—2 mxt Fox Hunt.
- 10.15-10.30—2 mxt Pedestrian Fox Hunt (for people with 40 mxt only).
- 10.15-10.45—Ladies' Throwing Contest (in 2 divisions: Rolling Pins, Radio).
- 11.15-12.00—2 mxt Fox Hunt.
- 11.15-11.45—Ladies' Hat Making Contest (materials supplied).
- 12.00-1.30—Lunch provided.
- 1.30—Quiz closing time.
- 1.30-1.45—2 mxt Pedestrian Fox Hunt.
- 1.30-4.00—Visit to Reptile Park or bus tour of area.
- 2.00-2.45—2 mxt Fox Hunt.
- 2.45-3.15—Afternoon Tea provided.
- 3.15-3.40—6 and 2 mxt Combined Map Talk-in (52.525 and Ch. 8).
- 4.00-4.15—2 mxt Pedestrian Fox Hunt.
- 4.15-4.30—Lucky Dips.
- 4.30-4.45—Disposals.

Other attractions: Local Jam and Cake Stall, 007s, soft drinks, lucky door prize, quizzes, trade displays, disposals (must be before 9.45 a.m.), children's events, Amateur Television, winning display and demonstration.

Amateur Radio, February, 1972

R. L. DRAKE COMMUNICATIONS EQUIPMENT

NOW AVAILABLE EX STOCK SYDNEY

We have the following available ex stock or on short delivery time:

★ SPR-4	SOLID STATE COMMUNICATIONS RECEIVER	\$520.00
★ R-4B	RECEIVER SSB-AM-CW-RTTY	\$615.00
★ 2-C	RECEIVER SSB-AM-CW-RTTY	\$342.00
★ SW-4A	RECEIVER INTERNATIONAL SHORT WAVE	\$390.00
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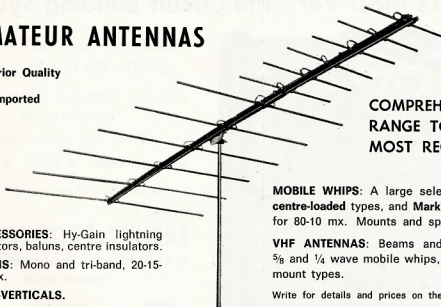
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Insert - February A.R.

STATE OF VICTORIA POWER RESTRICTIONS

February A.R. is late every year because of holidays and, consequently, printery shut down. It is not much later this year than any other.

The outlook for March A.R. at this moment appears gloomy because the printing house for A.R. has been closed — due to power loadings. There is no immediate evidence of the general power restrictions being lifted. At best, therefore, March A.R. — the first to be published by the Federal organisation — may be late.

The situation is under constant review and numerous alternatives are in mind — most are impractical, some are feasible. Any economically-sound ideas which any member might care to make would be most welcome and would be closely examined having regard to changing circumstances as each day passes.

Every endeavour will, of course, be made to get March A.R. printed and distributed by the First of the month. Failing this, any delay will be minimised.

73

Peter B. Dodd

P. B. Dodd
Federal Manager

Office of the Executive,
P.O. Box 67,
East Melbourne, Vic. 3002

9.2.1972

S T O P P R E S S: Items (in expanded form) for March included -

Oscar A-O-B has now been re-scheduled by AMSAT for 1973. A-O-C will be launched about June and will contain only the 2-metre / 10-metre U.S.A. transponder of the three systems originally planned for A-O-B.

Major "Bill" Mitchell, VK3UM, died of a heart attack on 2nd February. There were several other "silent keys" for March A.R.

Federal Convention is at Easter — MARCH 31ST — APRIL 3RD